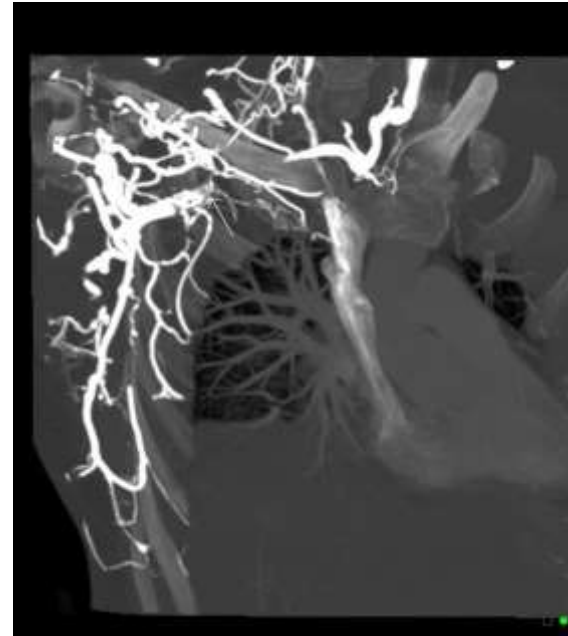




Thrombose Veineuse des Membres Supérieurs

Jean Pierre Laroche
Unité de Médecine Vasculaire
CHU Montpellier / Médipôle Avignon



No conflict of interest with my link\$.

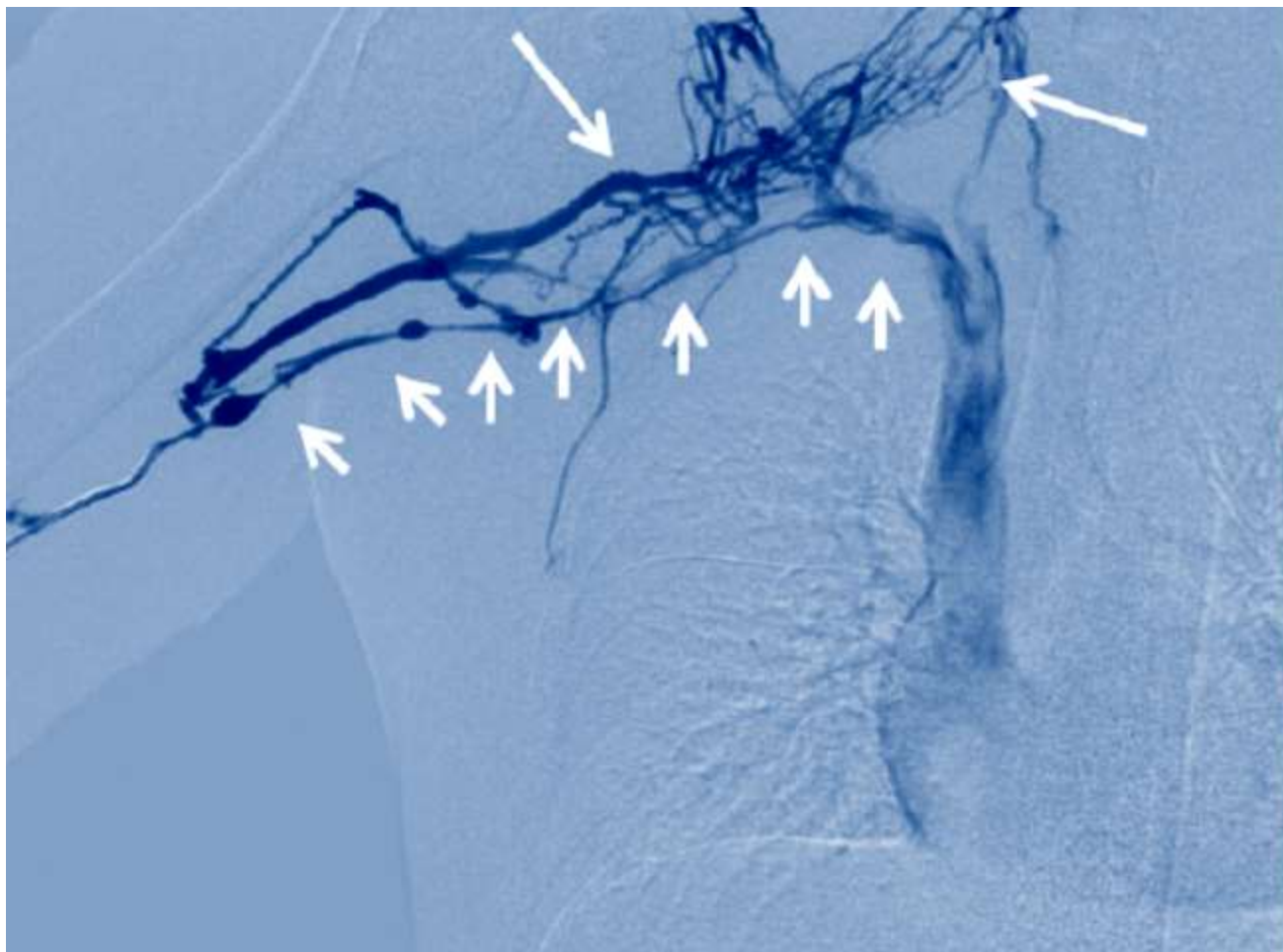
- **Investigateur** : Bayer Healthcare, BMS Pfizer
- **Membre Board** : Leo Pharma
- **Invitation Congrès** : Léo Pharma, Hitachi Aloka



Données générales

- ✚ Décrite par CRUVEILHIER en 1816, puis par PAGET (1875) et Von SCHROETTER (1884)
- ✚ 10% de l'ensemble des thromboses veineuses profondes
- ✚ Veine sous Clavière, axillaire, jugulaire
- ✚ Le challenge : LE SYNDROME du DEFILE (TVP d'effort)
- ✚ TVP primitive = Sd défilé (90% composante neurologique)
- ✚ **TVP secondaire** : compression, tumeur, PAC, IV, 2/3 des cas suite voie veineuse





Diagnostic Clinique +++





***« Nous cédon's tous à cette manie de deviner ce qui est,
au lieu de constater »***

Alain



Probabilité clinique des Thrombose Veineuse des membres supérieurs

« Matériel Veineux »	+1
Douleur localisée	+1
Œdème unilatéral	+1
Diagnostic différentiel	-1

Forte Probabilité	2 < Score < 3	70% de TVP
Probabilité Intermédiaire	Score = 1	38 % de TVP
Faible Probabilité	-1 < Score < 0	13 % de TVP

Constans J, Salmi LR, Sevestre-Pietri MA, Perusat S, Nguon M, Degeilh M, Labarere J, Gattolliat O, Boulon C, Laroche JP, Le Roux P, Pichot O, Quéré I, Conri C, Bosson JL. A clinical prediction score for upper extremity deep venous thrombosis. Thromb Haemost. 2008 Jan;99(1):202-7.

COLLATERALITE UNILATERALE



ORIGINAL ARTICLE

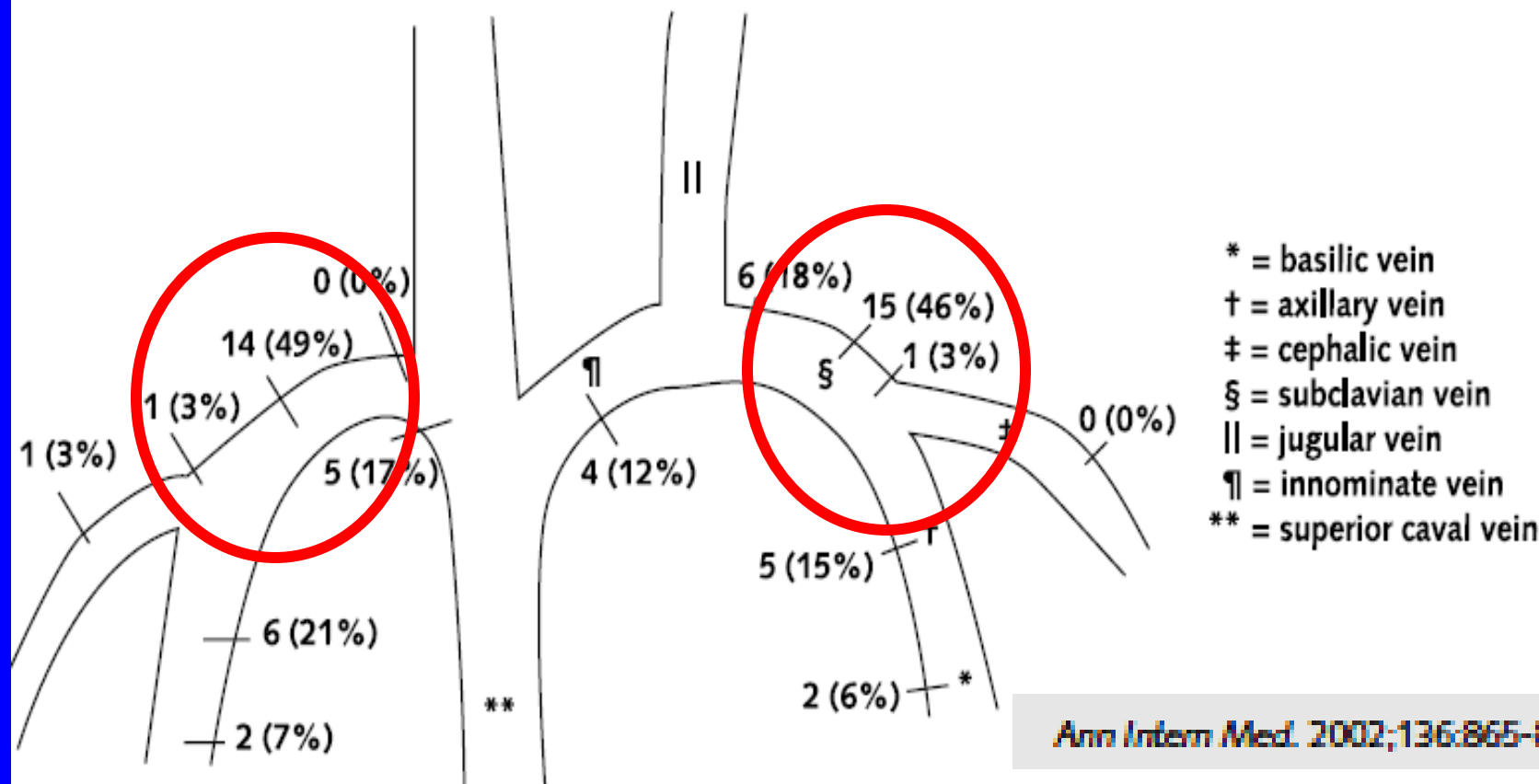
A prognostic score to identify low-risk outpatients with acute deep vein thrombosis in the upper extremity

V. ROSA-SALAZAR,* J. TRUJILLO-SANTOS,† J. A. DÍAZ PEROMINGO,‡ A. APOLLONIO,§ O. SANZ,¶
R. MALÝ,** F. J. MUÑOZ-RODRIGUEZ,†† J. C. SERRANO,‡‡ S. SOLER§§ and M. MONREAL¶¶ FOR
THE RIETE INVESTIGATORS¹

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Variable	POINT	
Insuffisance cardiaque	1	Score ≤ 1 : patients à faible risque , traitement à domicile +
Clairance Créatinine entre 60 et 30 ml/mn	1	
Clairance Créatinine < 30 ml/mn	3	
Hémorragie récente	1	Score > 1 : patients à faible risque , traitement à domicile +/-
Thrombopénie	1	
Immobilisation ou cancer sans métastases	1	
Cancer métastasé	2	





Localisation TVP MS



Diagnosis and management of upper extremity deep-vein thrombosis in adults

Jonathan D. Grant¹; Scott M. Stevens^{2,3}; Scott C. Woller^{2,3}; Edward W. Lee⁴; Stephen T. Kee⁴; David M. Liu⁵; Derek G. Lohan⁶; C. Gregory Elliott^{2,3}

¹Division of Radiation Oncology, MD Anderson Cancer Center, Houston, Texas, USA; ²Department of Medicine, Intermountain Medical Center, Murray, Utah, USA; ³Department of Medicine, University of Utah School of Medicine, Salt Lake City, Utah, USA; ⁴Division of Interventional Radiology, Department of Radiology, David Geffen School of Medicine at UCLA, Los Angeles, California, USA; ⁵Department of Radiology, Faculty of Medicine, University of British Columbia, Vancouver, British Columbia, Canada; ⁶Department of Radiology, Galway University Hospitals, Galway, Ireland

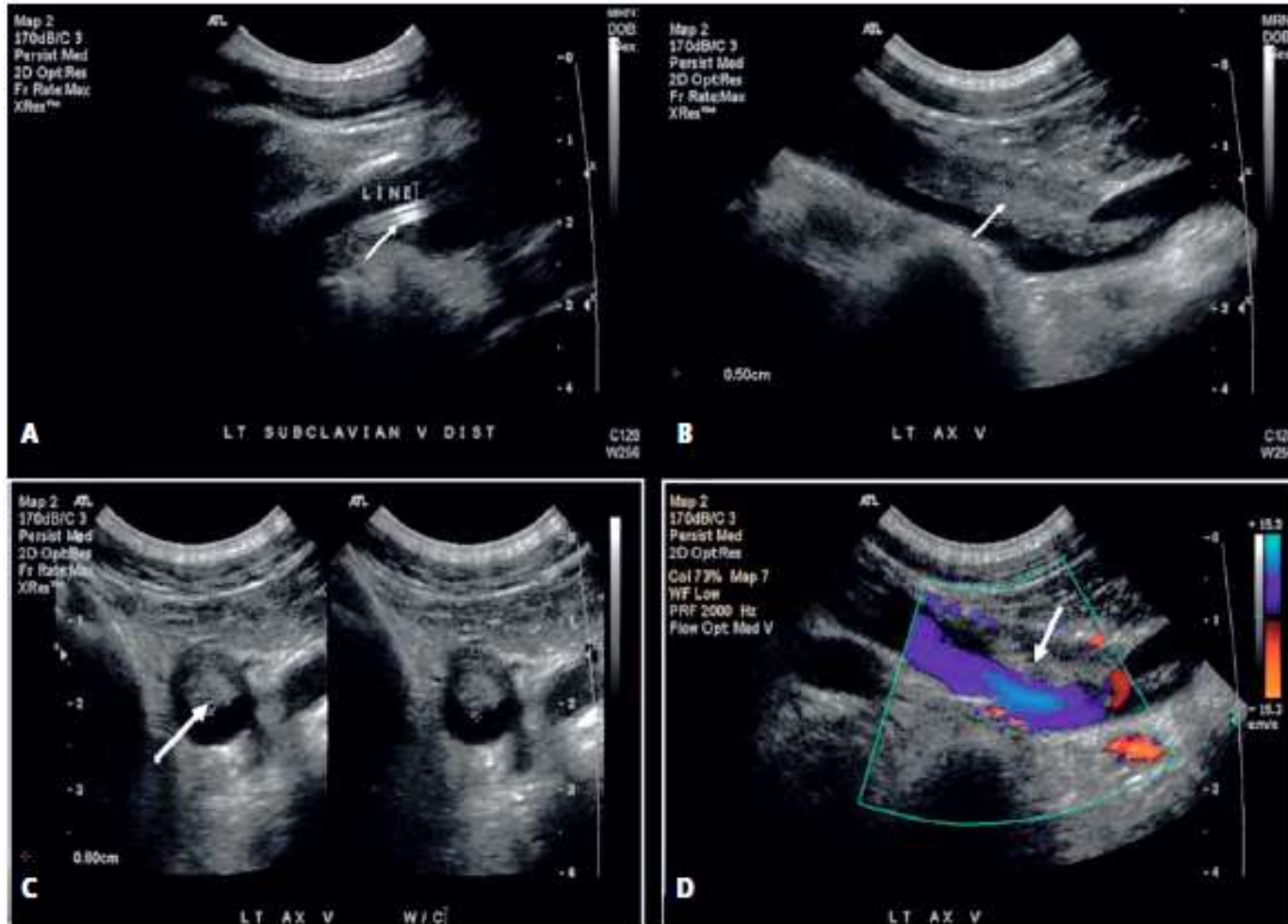
Table 3: Rates of symptomatic PE in patients with UEDVT.

Author	Patients, n	PE
Munoz, 2008	512	9%
Horattas, 1998	539	12.4%
De Cicco, 1997	63	3%
Hingorani, 1997	170	7%
Kooij, 1997	78	12%
Kerr, 1990	693	8%

**Risque EP
EXISTE**

Thrombosis and Haemostasis 108.6/2012



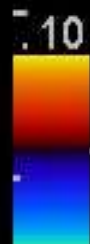


Diagnostic paraclinique Écho Doppler



100%

30/33
11Hz



10
F54

J INT

CC

Dist: 10.2mm

5.00M P3.5 G83 C13 A1

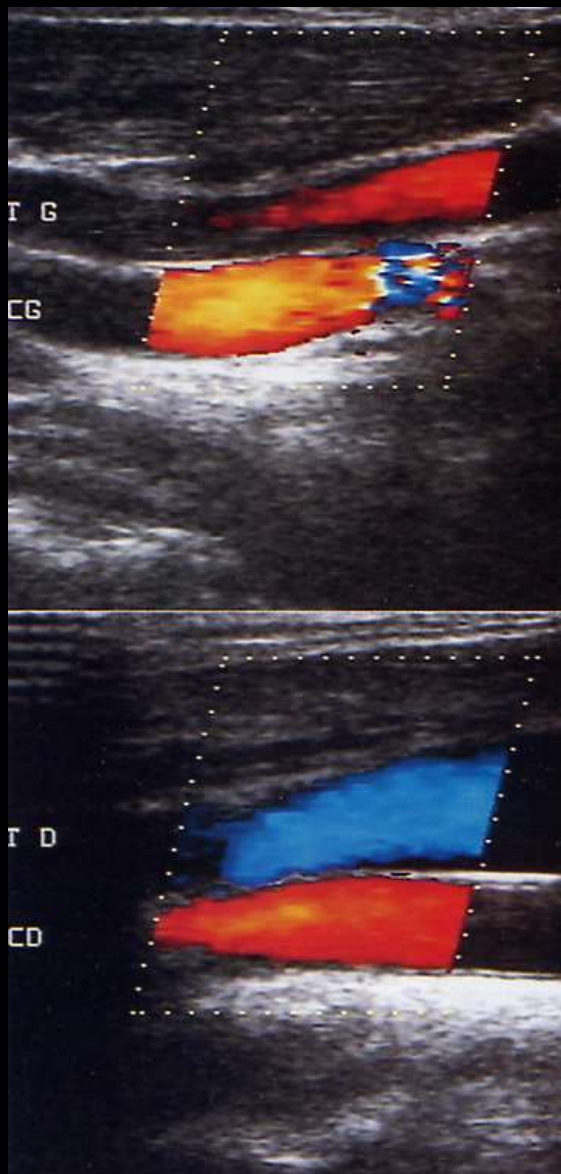
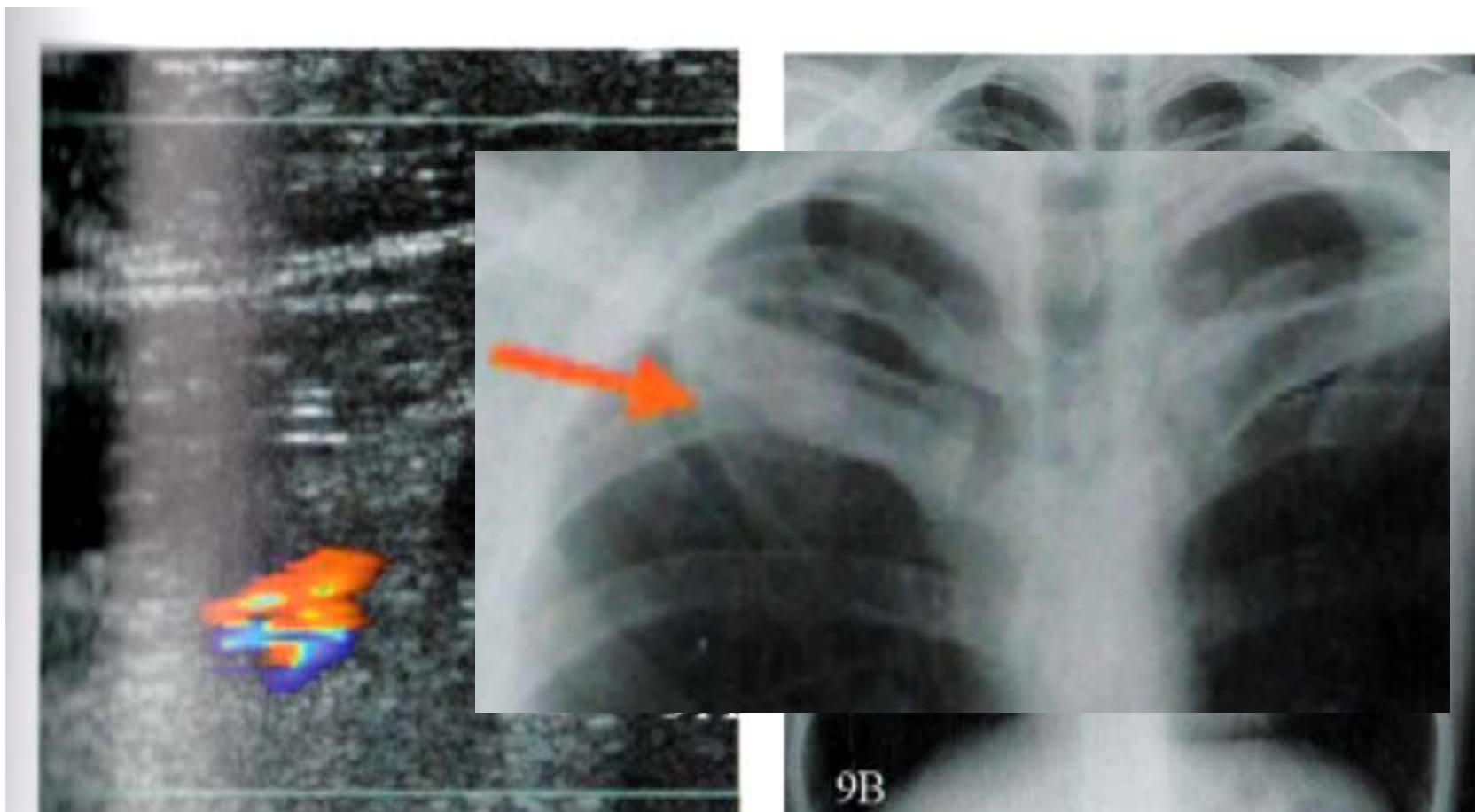


Figure 3.— Examen tomodensitométrique : tronc veineux innominé gauche non visible en reconstruction frontale.



Homme, 20 ans, tennisman mi professionnel, œdème MSD (droitier), radiographie pulmonaire hypertrophie K1

*JP Iaroche, M Righini,
2004, TVP Mode d'emploi*



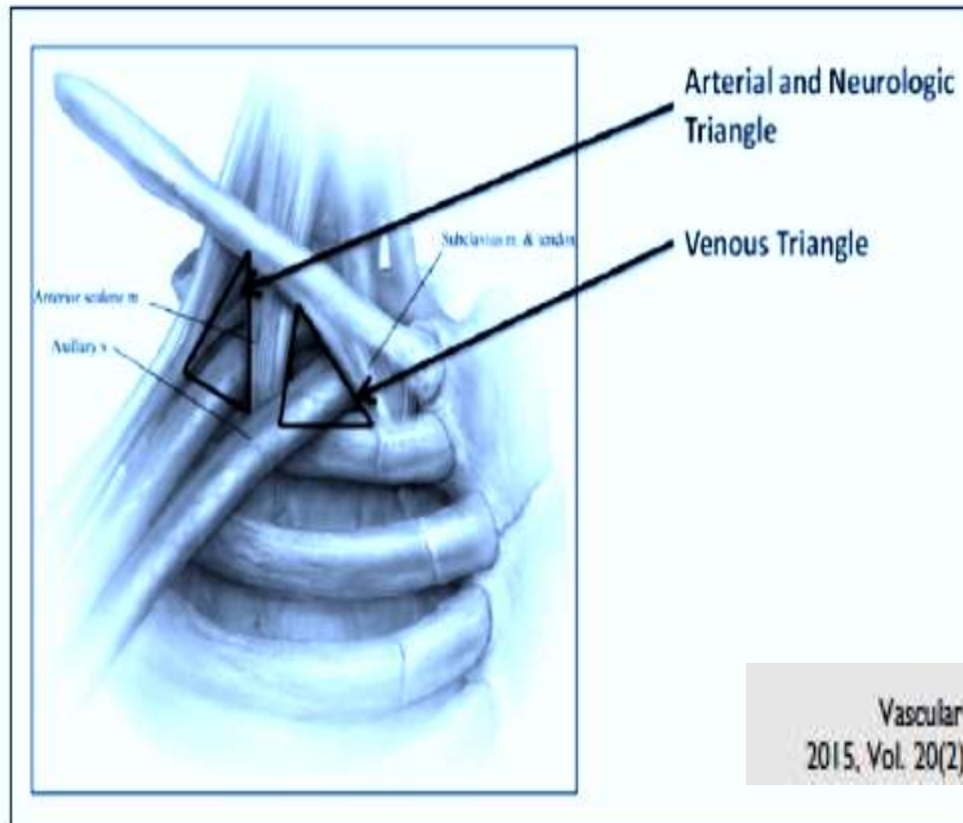


Author	Modality	Sensitivity	Specificity	Reference modality
Di Nisio, 2010	Ultrasound Compression Colour-flow Doppler Duplex	97% 84% 91%	96% 94% 93%	Mostly contrast venography
Thomas, 2008	Computed tomography venography (lower extremity)	95.9%	95.2%	Mostly ultrasound (12 of 13 studies)
Sampson, 2007	Magnetic resonance venography (lower extremity)	91.5%	94.8%	Mostly contrast venography (13 of 14 studies)

Table 4: Diagnostic accuracy in UEDVT (meta-analyses).

**Mais ED pris en défaut dans 1 cas
TV PROXIMALE ISOLEE VSC**



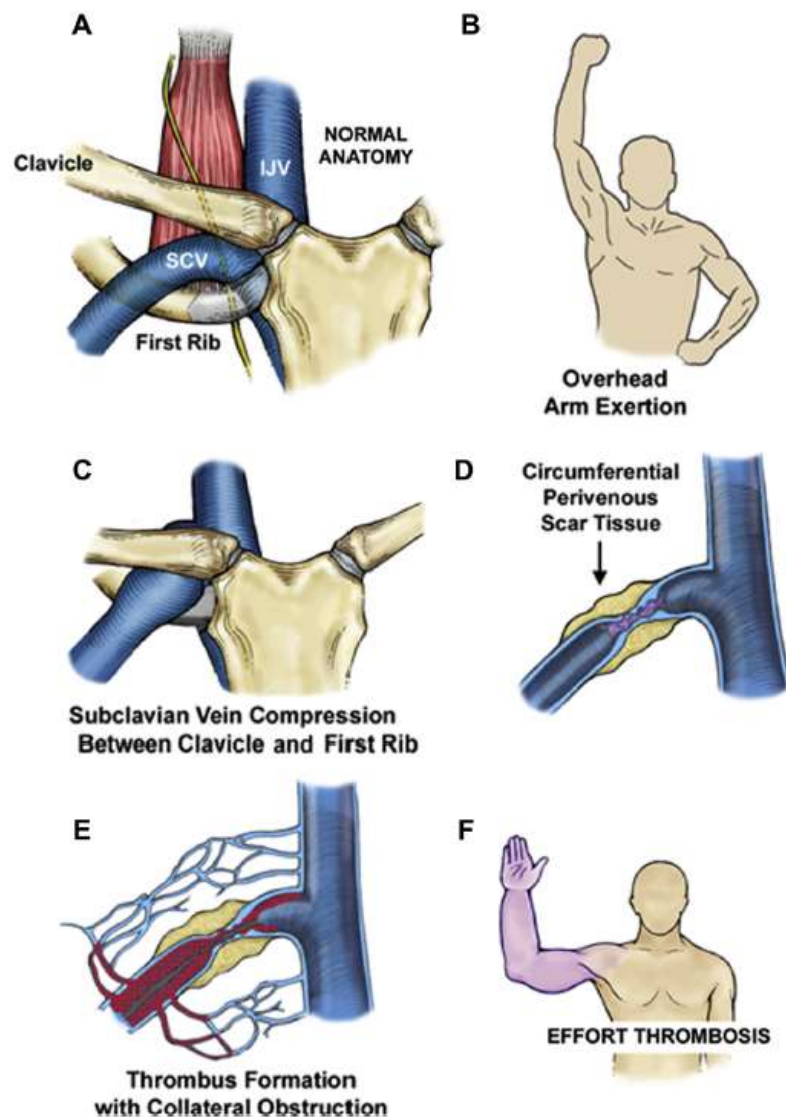


**Radiologie de base
Cervicale
Région sous Clavière**

**Recherche anomalies
osseuses**

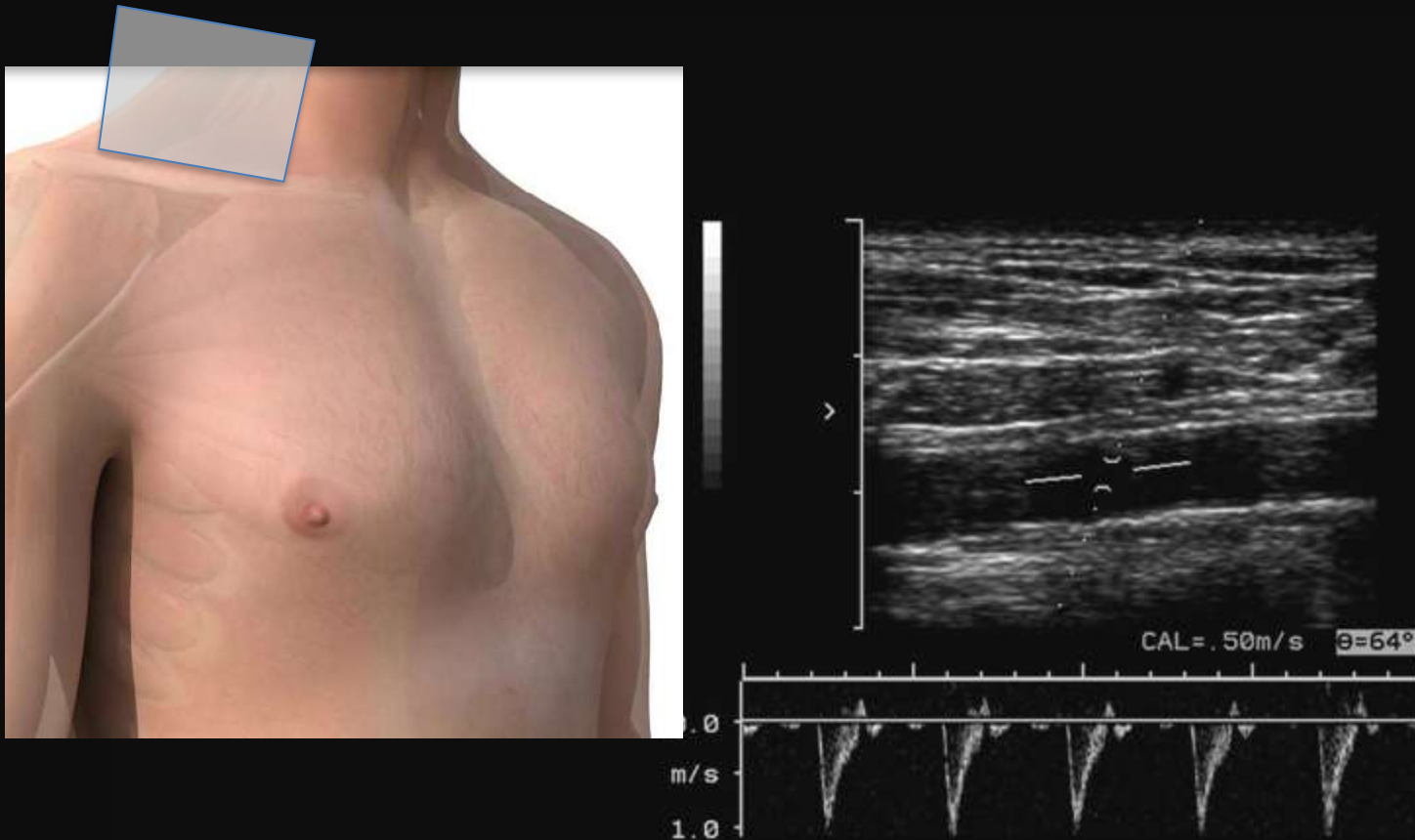
Cas particulier du Syndrome de la traversée thoraco- brachiale VEINEUX





Chandu Vemuri, MD,^{a,b,c} Payam Salehi, MD,^d Jaime Benarroch-Gampel, MD,^{a,b}
 Lauren N. McLaughlin, ACNP,^{a,b} and Robert W. Thompson, MD,^{a,b,c} *St Louis, Mo; and Boston, Mass*

Technique d'examen



Examen écho-Doppler – Abord sus-claviculaire



Technique d'examen : DOPPLER CONTINU



Abord sous-claviculaire



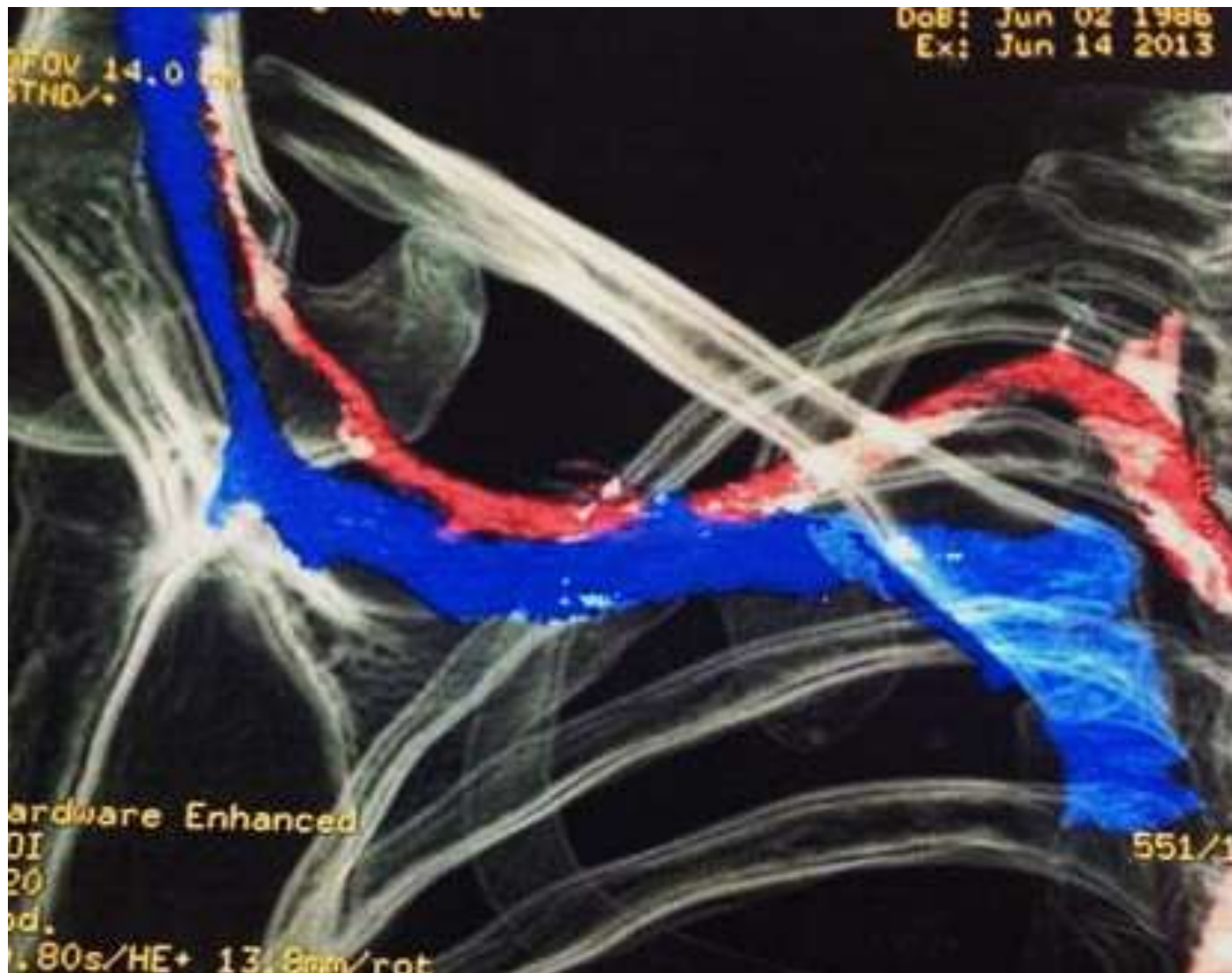
Abord sous-claviculaire



Abord sous-claviculaire



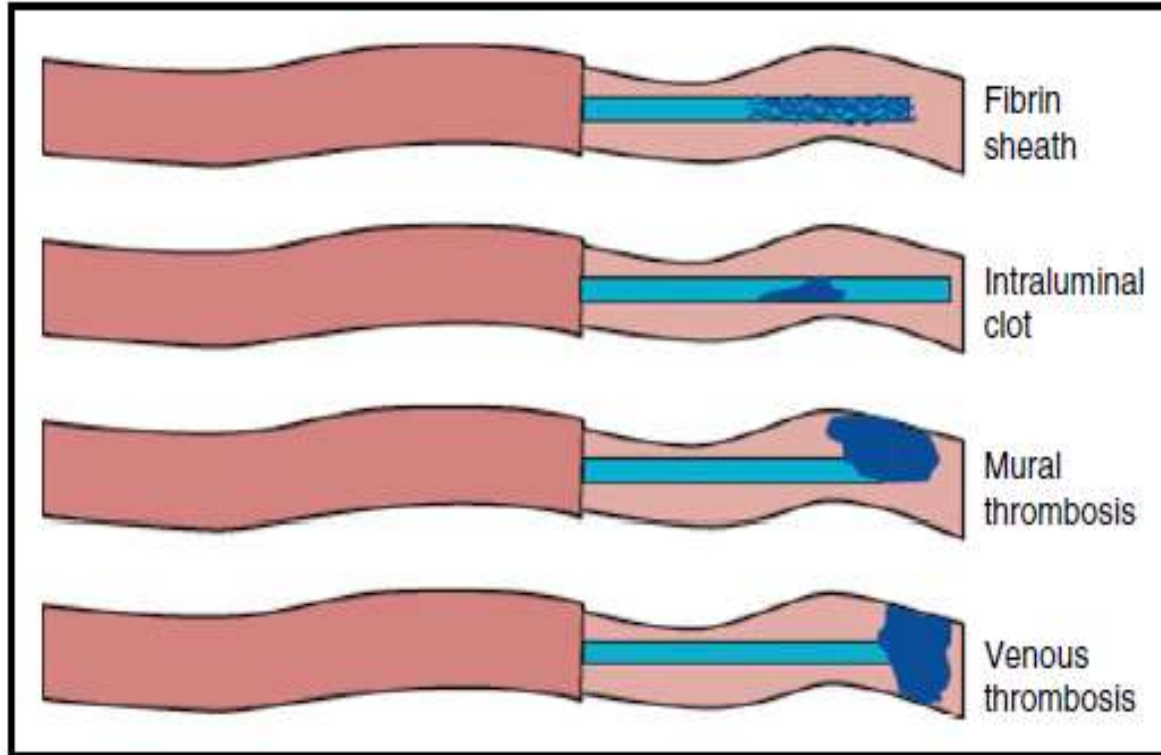
Abord sus-claviculaire



Gestion TVP MS Cas Particulier VVC (hors cancer)



Car particulier TVD MS sur VVC et PICCLINE



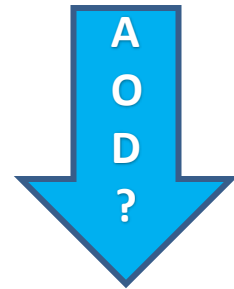
How I treat central venous access device–related upper extremity deep vein thrombosis

Anita Rajasekhar¹ and Michael B. Streiff^{2,3}

From www.bloodjournal.org by guest on May 23, 2017.



Car particulier TVD MS sur VVC et PICCLINE (hors cancer)



Prevention

Place CVAD in subclavian > jugular > femoral insertion site.

Place port > Hickman > PICC.

Place smallest caliber catheter necessary.

Place catheter tip at SVC-RA junction.

Do not use anticoagulant thromboprophylaxis.

Diagnosis

Ultrasound to confirm suspected thrombosis.

No ultrasound surveillance.

CT (or MRI) venography to confirm suspected thrombosis in patients with negative venous ultrasound.

Treatment

Anticoagulation for 3 mo or until CVAD removed (whichever is longer).

Thrombolysis for limb-threatening CRT or severe symptoms and failure to respond to AC.

CVAD removal if AC contraindicated or infected or no longer needed (add AC if contraindication resolves).

Avoid SVC filter use.

Graduated compression garment for symptomatic upper extremity PTS but not PTS prevention.

How I treat central venous access device–related upper extremity deep vein thrombosis

Anita Rajasekhar¹ and Michael B. Streiff^{2,3}

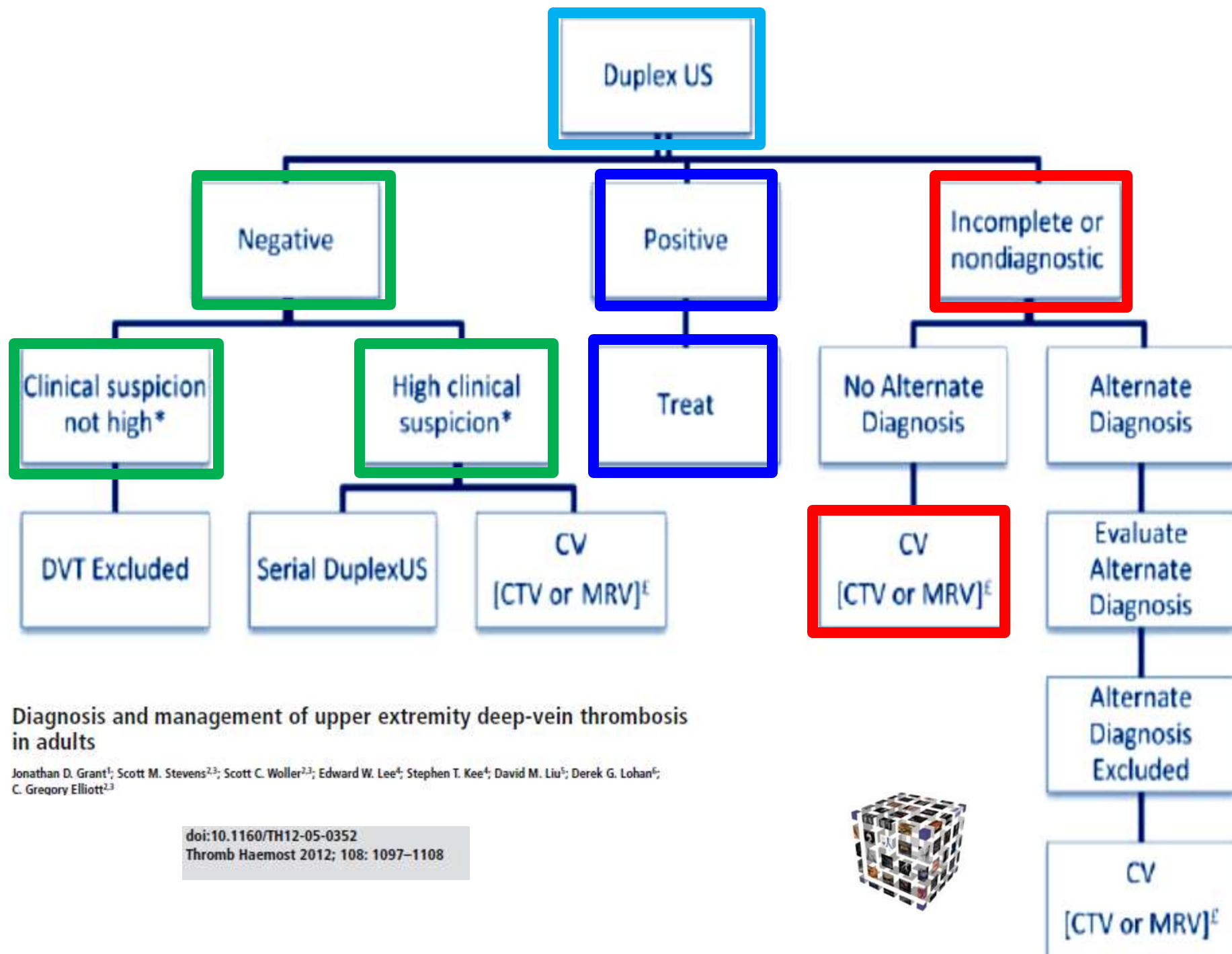
From www.bloodjournal.org by guest on May 23, 2017.





Gestion TVP MS





Diagnosis and management of upper extremity deep-vein thrombosis in adults

Jonathan D. Grant¹; Scott M. Stevens^{2,3}; Scott C. Woller^{2,3}; Edward W. Lee⁴; Stephen T. Kee⁴; David M. Liu⁵; Derek G. Lohan⁶; C. Gregory Elliott^{2,3}

doi:10.1160/TH12-05-0352
Thromb Haemost 2012; 108: 1097–1108



Tableau 1

Étiologie des thromboses veineuses du membre supérieur.

Thromboses veineuses dites « primitives »

Syndrome du défilé thoracobrachial

Phlébites d'effort

Thromboses idiopathiques

20%

Thromboses veineuses secondaires

Causes iatrogènes (cathéter central ou périphérique, chambre implantable, sonde de stimulation intracardiaque)

Néoplasies par compression locale ou dans le cadre d'un syndrome de Trousseau

Syndrome d'hyperviscosité (maladie de Vaquez, thrombocytemie, syndrome myélo- ou lymphoprolifératif)

Traumatisme

Stimulation ovarienne

Syndrome des anti-phospholipides (primaire ou secondaire)

Maladie inflammatoires (maladie de Behçet, lupus érythémateux disséminé, maladie de Crohn)

Facteurs favorisants (thrombophilies constitutionnelles ou acquises, contraception estroprogestative, hormonothérapie)

80%



Table 3. Summary of studies evaluating thrombophilia as risk factor of deep vein thrombosis of the upper extremities

First author (reference)	Patients/controls	Deaths	PE	Recurrence	Risk factors
Martinelli (43,44)	115/797	NR	NR	12/98 (12%)	PT, PC, PS and AT were associated with 5-fold increased risk, FVL with 6-fold increased risk
Prandoni (45)	53/0	11/53 (21%)	1/53 (2%)	3/53 (6%)	12 patients (22.6%) had inherited thrombophilia (6 FVL, 3 PC, 2 AT, 1 PT)
Blom (46)	179/2399	NR	NR	NR	PT and FVL associated with 2-fold increased risk; synergistic effect between mutations and acquired risk factors (oral contraceptive use, cancer, surgery)
Baarslag (47)	50/33	25/50 (50%)	NR	4/50 (8%)	6 of 30 (20%) investigated patients (20%) had inherited thrombophilia (3 FVL, 2 PS, 1 PT)
Heron (52)	51/0	NR	11/51 (21%)	2/51 (4%)	7 patients (23%) had inherited thrombophilia (5 FVL, 2 PS)
Hendler (53)	31/0	NR	NR	NR	19 patients (61%) had one or more thrombophilic abnormality (4 FVL, 3 PT, 1 PS, 14 APA, 5 HHcy)
Leebeek (54)	41/0	NR	2/41 (5%)	1/41 (2%)	15 patients (32%) had one or more thrombophilic abnormality (2 FVL, 1 AT, 11 APA, 1 combination)
Vaya (55)	79/165	NR	NR	NR	12 patients (15%) had inherited thrombophilia (9 PT, 3 FVL). Synergistic effect between mutations and oral contraceptive use



Traitement

Table 5: Summary of therapeutic outcomes for UEDVT.

Treatment	Benefit	Major complications, %
Anticoagulation	48–70% symptom resolution	2–4%
Catheter-directed thrombolysis	72–91% initial thrombus clearance	8–11% (data from lower extremities)
Pharmacomechanical catheter-directed thrombolysis	8/8 treated patients had patent central veins at six months	3–4% (data from both upper and lower extremities)
SVC filter placement	Uncertain benefit	3.8%

- **Durée du traitement : 3 mois si FD +, 6 mois FD – = HBPM/AVK (CHEST 2012), AOD (oui)**
- **Compression classe 2 ou 3,**
- **DLM, ré éducation MS**
- **Fibrinolyse.... : sujets jeunes et sportifs**
- **MVPT ?**



RESEARCH

Open Access



Treatment with direct oral anticoagulants in patients with upper extremity deep vein thrombosis

Francisco Sánchez Montiel, Raein Ghazvinian, Anders Gottsäter and Johan Elf*

N = 55 patients

Table 2 Six months follow-up of 55 patients with upper extremity deep vein thrombosis (UEDVT) treated with direct oral anticoagulants (DOAC), N(%)

Death	0(0)
DVT recurrence on treatment	1(2)
DVT recurrence after cessation	2(4)
Major bleeding	0(0)
Clinically relevant nonmajor bleeding	1(2)
Treatment change	1(2)
Post thrombotic syndrome	6(11)
Prescribed permanent anticoagulation at 6 months	6(11)

Conclusion

DOAC can be used for treatment of patients with UEDVT with acceptable recurrence and bleeding rates.



CASE REPORT

Open Access

A case of Paget-Schroetter syndrome (PSS) in a young judo tutor: a case report



(37 ans)

Ruth Ijaopo*, Victor Oguntolu, Dominick DCosta, Andrew Garnham and Simon Hobbs

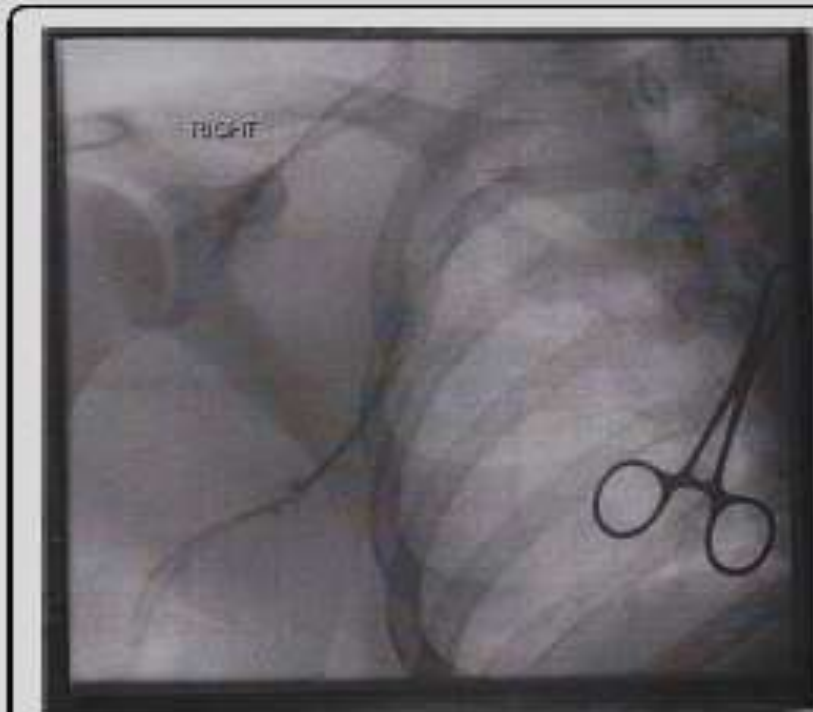


Fig. 1 Prethrombolysis venogram

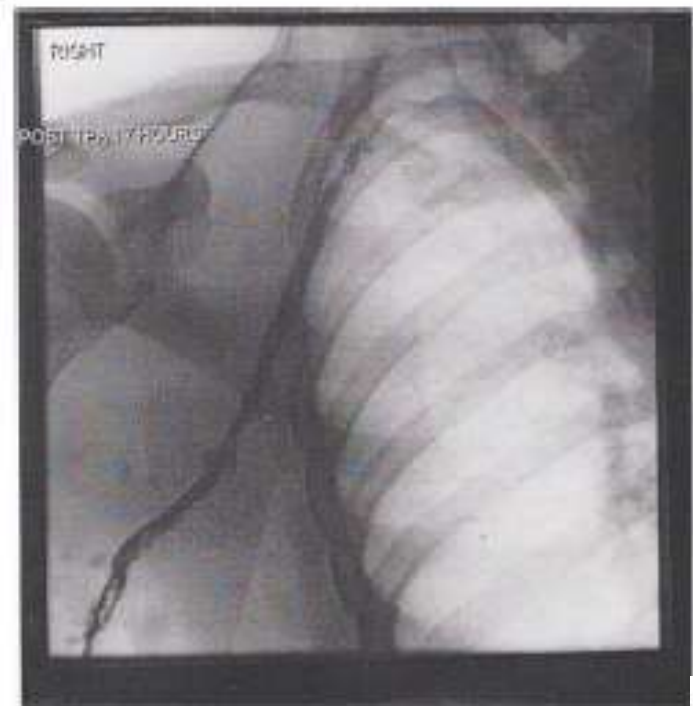


Fig. 2 Postthrombolysis venogram



Évolution des TVP du MS

Table 1 Overview of different studies regarding complications in patients with venous thrombosis of the upper extremity

Author	No. cases	% men	Mean age (range)	Primary vs. Secondary	PTS (%)	Recurrence (annual, %)	Mortality (%)
Hingorani 1997[15]	170	39	68 (9–101)	Both	7	–	34
Prandoni 1997[46]	27	70	53 (19–79)	Both	15	7	15
Martinelli 2004[51]	96	36	32 (14–61)	Primary	–	2	–
Baarslag 2004[67]	50	42	52 (23–86)	Both	18	8	50
Prandoni 2004[69]	53	31	44 –	Both	20	2	20
Hingorani 2005[66]	546	40	68 (1–101)	Both	–	–	29
Kahn 2005[68]	34	46	51 (22–86)	Both	44	–	–
Hingorani 2006[65]	598	38	69 (9–101)	Both	–	–	29

Current perspective of venous thrombosis in the upper extremity

L. E. FLINTERMAN,* F. J. M. VAN DER MEER,† F. R. ROSENDAAL*† and C. J. M. DOGGEN*

*Department of Clinical Epidemiology, †Department of Thrombosis and Haemostasis, Leiden University Medical Center, Leiden, the Netherlands



**TVP MS, spontanée , sujet <
30 ans, sportif = DEFILE
PROBABLE**

**Si femme < 30/40 ans
CO, thrombophilie**

Traitement agressif possible

**TVP MS, spontanée ,
sujet > 50 ans,
recherche CANCER
en UN**

**2/3 des TVP du
MS : VOIES
VEINEUSES**



Take Home Message

- ✚ Les TVP su MS ont augmenté ces 10 dernières années du fait du nombre important de VVC, PAC, sonde cardiaque, cathéters d'hémodialyse
- ✚ Les TVP du MS secondaires sont les plus fréquentes (80%)
- ✚ Les TVP du MS primitives rassemblent les TVP d'effort, les micro traumatismes répétés et le Sd de la traversée
- ✚ L'écho Doppler est l'examen diagnostique de première intention, si non conclusif : Scanner ou IRM
- ✚ Traitement anticoagulant est la règle, dans certains cas un traitement plus agressif (fibrinolyse) peut être indiqué (sujets jeunes et sportifs)



